

Exhibit A

U.S. Patent No. 7,339,714

'714 Patent Term/Phrase (claim #)	Cheetah's Proposed Construction	Support
unmodulated (1, 18)	an optical signal that has not been processed by the array of optical signal processing devices	<i>Cheetah Omni LLC v. Samsung Electronics America, Inc.</i> , CA No. 6:08 CV 279, 2009 WL 5196721 (E.D.Tex. 12/21/2009), <i>aff'd</i> , 397 Fed. Appx. 644 (Fed. Cir. 2010); claims 1, 18; 18:61–67, 19:8–10, 20:14–19
unmodulated optical signal (1, 18)	light beam carrying information that has not been processed by the array of optical signal processing devices	
array [of optical signal processing devices] (1, 5, 18, 19)	a plurality of devices arranged in a regular pattern	<i>Cheetah Omni LLC v. Samsung Electronics America, Inc.</i> , CA No. 6:08 CV 279, 2009 WL 5196721 (E.D.Tex. 12/21/2009), <i>aff'd</i> , 397 Fed. Appx. 644 (Fed. Cir. 2010); Claims 1, 5, 18, 19
[array of] optical signal processing devices (1, 5, 18, 19)	devices that process the optical signal; the sub-elements of the “at least some of the optical signal processing devices comprise” limitation define what the optical signal processing devices must include, at a minimum	<i>Cheetah Omni LLC v. Samsung Electronics America, Inc.</i> , CA No. 6:08 CV 279, 2009 WL 5196721 (E.D.Tex. 12/21/2009), <i>aff'd</i> , 397 Fed. Appx. 644 (Fed. Cir. 2010); Claims 1, 5, 18, 19
located on one or more semiconductor substrates (1, 5, 18, 19) (SAME AS '479 patent)	plain meaning	Claims 1, 5, 18, 19
semiconductor substrates (1, 5, 18, 19) (SAME AS '479 patent)	plain meaning, namely, a substrate made of semiconductor material, such as silicon	Claims 1, 5, 18, 19; 3:23-28, 18:55-67

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'714 Patent Term/Phrase (claim #)	Cheetah's Proposed Construction	Support
to modulate (1, 18) modulated (1, 18) modulation (18)	to process by the array of optical signal processing devices processed by the array of optical signal processing devices processing by the array of optical signal processing devices	<i>Cheetah Omni LLC v. Samsung Electronics America, Inc.</i> , CA No. 6:08 CV 279, 2009 WL 5196721 (E.D.Tex. 12/21/2009), <i>aff'd</i> , 397 Fed. Appx. 644 (Fed. Cir. 2010); claims 1, 18; Abstract; 1:54-2;11, 3:20-22
at least some of the optical signal processing devices comprise . . . a plurality of at least partially reflective mirrors (1, 18) (SAME AS '479 patent) the array of optical signal processing devices . . . comprising a plurality of at least partially reflective mirrors (5, 19)	a combination of one or more of the optical signal processing devices have a plurality of mirrors	Claims 1, 5, 18, 19; Figs 1a-6c; 7:56-63
at least some of the mirrors are operable to undergo a partial rotation in response to the control signal (1, 18)	plain meaning	Claims 1, 18; Figs. 1b, 1c, 2b, 3a, 3c, 4a, 4c, 5a, 5c,
substantially continuous layer (3,7)	a layer that is largely, but not necessarily entirely continuous	Claims 3, 7; Webster's Ninth New Collegiate Dictionary 1176 (9th ed.1983) ("substantially" means "largely but not wholly that which is specified.")
receiving at least the portion of the first signal part at the an array of optical signal processing devices (5)	plain meaning	Claim 5

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U.S. Patent No. 6,847,479

'479 Patent Term/Phrase (claim #)	Cheetah's Proposed Construction	Support
variable blazed gratings (13, 20, 23)	gratings where each grating can be adjusted to cause the majority of an optical signal to be communicated in one direction	Claims 13, 20, 23; 2:53-60, 4:27-31; 5:51-55, 10:9-12, 11:45-49, 12:14-16, Titus, et al., <i>Diffraction Efficiency of Thin Film Holographic Beam Steering Devices</i> (February 1, 2003) http://archive.org/download/nasa_techdoc_20030017837/20030017837.pdf ; Finisar White Paper "Programmable narrow-band filtering using the WaveShaper 1000E and WaveShaper 4000E" (2008); expert testimony as to the meaning of the term "variable blazed grating" to those of ordinary skill in the art at the time of the invention
array of optical signal processing devices (50-60, 64)	a plurality of devices arranged in a regular pattern that process the optical signal ¹	Cheetah Omni LLC v. Samsung Electronics America, Inc., CA No. 6:08 CV 279, 2009 WL 5196721 (E.D.Tex. 12/21/2009), aff'd, 397 Fed. Appx. 644 (Fed. Cir. 2010); claims 50-60, 64

¹ Cheetah's construction was an agreed construction until the close of business the day this claim construction chart was due (November 8, 2012). On October 18, 2012, Plaintiff and Defendants proposed identical constructions for this term in their PR 4-2 Preliminary Constructions. The agreed construction remained unchanged for three weeks while the parties met and conferred, by phone and by email, to discuss the proposed constructions and try to narrow the issues. On November 8, 2012, after Cheetah had finalized this claim chart and was preparing to file the PR 4-3 Joint Claim Construction and Prehearing Statement, defendants emailed that they were changing their longstanding construction. Defendants' actions violated PR 4-3(c) because (1) they did not meet and confer with Cheetah and (2) contrary to PR 4-3(c), defendant's action failed to narrow the issues. Defendants' last minute change left Cheetah with no time to locate intrinsic and extrinsic support beyond the *Cheetah v. Samsung* case and the claims themselves.

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'479 Patent Term/Phrase (claim #)	Cheetah's Proposed Construction	Support
located on one or more semiconductor substrates (13, 23, 50, 64) (SAME AS '714)	plain meaning	Claims 13, 23, 50, 64
semiconductor substrates (13, 23, 50, 64) (SAME AS '714)	plain meaning, namely, a substrate made of semiconductor material, such as silicon	Claims 13, 23, 50, 64; 4:41-44; 20:14-23
electronic processor (20, 23, 50-60, 64)	plain meaning, namely, a processor that operates electronically	Claims 20, 23, 50-60, 64; 4/13/04 Office Action
electronic processing operation on a portion of at least one of the one or more optical signals (20) electronic processing operation on at least a portion of the optical signal (23) processing operation on at least some of the portion of the optical signal (50-60, 64)	using electrical signals to attenuate, switch, phase shift, or otherwise manipulate a portion of the optical signal	Claims 20, 23, 50-60, 63; 4:37-39; 4/13/04 Office Action
at least some of the optical signal processing devices comprise . . . a plurality of at least partially reflective mirrors (50-60, 64) (SAME AS '714)	a combination of one or more of the optical signal processing devices have a plurality of mirrors	Claims 50-60, 64; Figs 1a-6c; 7:56-63

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U.S. Patent No. 6,856,459

'459 Patent Term/Phrase (claim #)	Cheetah's Proposed Construction	Support
polarization controller (1)	preamble; no construction necessary	N/A
controlling the state of polarization (17)		
optical signal (17)	light beam carrying information	<i>Cheetah Omni LLC v. Samsung Electronics America, Inc.</i> , CA No. 6:08 CV 279, 2009 WL 5196721 (E.D.Tex. 12/21/2009), <i>aff'd</i> , 397 Fed. Appx. 644 (Fed. Cir. 2010); claims 1, 17
input optical signal (1) (SAME AS '647)	input light beam carrying information ²	
at least three stages of phase shifters each operable to introduce a phase shift (1) (SAME AS '647)	stages that cause the phase between two waves to change	Claim 1; Abstract; Figs. 7a, 7b; 2:48-59, 20:34-37; 23:31-32, 32:42-47; Hecht, <i>Understanding Fiber Optics</i> (4 th Ed. 2002) ("The phase shift between two waves determines how their amplitudes add or interfere.")

² Cheetah's constructions were agreed constructions until the close of business the day this claim construction chart was due (November 8, 2012). On October 18, 2012, Plaintiff and Defendants proposed identical constructions for these terms in their PR 4-2 Preliminary Constructions. The agreed constructions remained unchanged for three weeks while the parties met and conferred, by phone and by email, to discuss the proposed constructions and try to narrow the issues. On November 8, 2012, after Cheetah had finalized this claim chart and was preparing to file the PR 4-3 Joint Claim Construction and Prehearing Statement, defendants emailed that they were changing their longstanding constructions. Defendants' actions violated PR 4-3(c) because (1) they did not meet and confer with Cheetah and (2) contrary to PR 4-3(c), defendant's action failed to narrow the issues. Defendants' last minute change left Cheetah with no time to locate intrinsic and extrinsic support beyond the *Cheetah v. Samsung* case and the claims themselves.

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'459 Patent Term/Phrase (claim #)	Cheetah's Proposed Construction	Support
phase shift between the first and second principal modes (1) (SAME AS '647) phase shift between the first and second modes of polarization (17)	a change in phase of one polarization mode relative to the other	Claims 1, 17, Abstract, Figs. 7a, 9, 15; 2:48-59, 12:12-17, 17:2-5, 18:3-13; 20:34-43, 23:18-25, 26:33-35; Hecht, Understanding Fiber Optics (4 th Ed. 2002) ("The phase shift between two waves determines how their amplitudes add or interfere.")
beam splitter (1,17) (SAME AS '647)	an optical device that splits light into two or more parts	Claims 1, 16, 17, 29; Abstract; Figs. 1a-9, 10b, 14c, 16a-d; 9:18-26, 9:31-39; 10:14-17; 7/29/04 Response to Office Action; 8/17/04 Notice of Allowability
beam splitter that is shared (1, 17) (SAME AS '647)	plain meaning	Claims 1, 16, 17, 29; Abstract; Figs. 1a-9, 10b, 14c, 16a-d; 2:50-55, 20:51-58, 21:43-45, 26:37-39
partially transmitting mirror (1,17) (SAME AS '647)	a surface or collection of surfaces that both reflects and transmits the incident optical signal, such as a partially silvered mirror or a mirror made from one or more layers of a dielectric coating	Claims 1, 16, 17, 29; Abstract; Figs. 1a-9, 10b, 14c, 16a-d; 9:21-23, 19:57-61, 20:59-62; 7/29/04 Response to Office Action; 8/17/04 Notice of Allowability; expert testimony as to the meaning of the term "partially transmitting mirror" to those of ordinary skill in the art at the time of the invention

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U.S. Patent No. 6,940,647

'647 Patent Term/Phrase (claim #)	Cheetah's Proposed Construction	Support
optical signal (1) (SAME AS '459)	light beam carrying information ³	<i>Cheetah Omni LLC v. Samsung Electronics America, Inc.</i> , CA No. 6:08 CV 279, 2009 WL 5196721 (E.D.Tex. 12/21/2009), aff'd, 397 Fed. Appx. 644 (Fed. Cir. 2010); claim 1
beam splitter (1) (SAME AS '459)	an optical device that splits light into two or more parts	Claims 1, 4; Abstract; Figs. 1a-9, 10b, 14c, 16a-d; 9:18-26, 9:31-39; 10:14-17; 7/29/04 Response to Office Action; 8/17/04 Notice of Allowability
polarization adjustment device (1)	plain meaning, namely, a device that adjusts polarization	Claim 1 (which defines the composition of the polarization adjustment device)
beam splitter that is shared (1) (SAME AS '459)	plain meaning	Claim 1; Abstract; Figs. 7a, 7b; 2:50-55, 20:51-58, 21:43-45, 26:37-39

³ Cheetah's construction was an agreed construction until the close of business the day this claim construction chart was due (November 8, 2012). On October 18, 2012, Plaintiff and Defendants proposed identical constructions for this term in their PR 4-2 Preliminary Constructions. The agreed construction remained unchanged for three weeks while the parties met and conferred, by phone and by email, to discuss the proposed constructions and try to narrow the issues. On November 8, 2012, after Cheetah had finalized this claim chart and was preparing to file the PR 4-3 Joint Claim Construction and Prehearing Statement, defendants emailed that they were changing their longstanding construction. Defendants' actions violated PR 4-3(c) because (1) they did not meet and confer with Cheetah and (2) contrary to PR 4-3(c), defendant's action failed to narrow the issues. Defendants' last minute change left Cheetah with no time to locate intrinsic and extrinsic support beyond the *Cheetah v. Samsung* case and the claims themselves.

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'647 Patent Term/Phrase (claim #)	Cheetah's Proposed Construction	Support
at least three stages of phase shifters each operable to introduce a phase shift (1) (SAME AS '459)	stages that cause the phase between two waves to change	Claim 1; Abstract; Figs 7a,7b,7c, 8a, 8c; 2:50-61; 20:34-37; 23:31-32, 32:42-47; Hecht, Understanding Fiber Optics (4 th Ed. 2002) ("The phase shift between two waves determines how their amplitudes add or interfere.")
phase shift between the first and second principal modes (1) (SAME AS '459)	a change in phase of one polarization mode relative to the other	Claim 1, Abstract, Figs. 7a, 9, 15; 2:46-61, 12:12-17, 17:2-5, 18:3-13; 20:34-43, 23:18-25, 26:33-35; Hecht, Understanding Fiber Optics (4 th Ed. 2002) ("The phase shift between two waves determines how their amplitudes add or interfere.")
partially transmitting mirror (1) (SAME AS '459)	a surface or collection of surfaces that both reflects and transmits the incident optical signal, such as a partially silvered mirror or a mirror made from one or more layers of a dielectric coating	Claims 1 & 4; 9:21-23, 19:57-61, 20:59-62; 7/29/04 Response to Office Action; 8/17/04 Notice of Allowability; expert testimony as to the meaning of the term "partially transmitting mirror" to those of ordinary skill in the art at the time of the invention

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U.S. Patent No. 6,882,771

'771 Patent Term/Phrase (claim #)	Cheetah's Proposed Construction	Support
multiple band optical communication system (15)	preamble, no construction needed	N/A
<p>“the first part” in:</p> <p>communicating at least <u>the first part</u> toward a moveable mirror of a micro-electro-optic system (MEMS) device (8)</p> <p>a micro-electro-optic system (MEMS) device comprising a moveable mirror layer operable to receive <u>the first part</u> of the input signal . . . (15)</p>	at least a portion of the first signal part that was output from the beam splitter	Claims 8, 15; 42:31-32
the gain equalizer operable to . . . selectively introduce attenuation or gain into the at least one of the plurality of amplified wavelengths (15)	choosing to change the amplitude of one or more of the plurality of amplified wavelengths	Claim 15; 34:12-18
to form (8, 15)	plain meaning	<p>Claims 8, 15; The Wordsmyth English Dictionary-Thesaurus (form: “to make, create, or construct.”)</p> <p>http://www.wordsmyth.net/?level=3&ent_l=form&rid=16079; Merriam-Webster's Online Dictionary, 11th Edition (form: “to serve to make up or constitute: be an essential or basic element of”)</p> <p>http://www.merriam-webster.com/dictionary/form</p>

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'771 Patent Term/Phrase (claim #)	Cheetah's Proposed Construction	Support
reflecting the first part toward an output to form at least one output signal (8) to reflect the first part of the input signal toward an output to form an output signal (15)	plain meaning	Claims 8, 15; 10:39-42
displacing the movable mirror to cause a change in the amplitude of the output signal (claim 8) the amplitude of the output signal varying depending on the displacement of the moveable mirror layer (15)	the amplitude of the output signal changes based on the position of the moveable mirror	Claims 8, 15; Figs. 1a-3c, 6, 17

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U.S. Patent No. 7,116,862

'862 Patent Term/Phrase (claim #)	Cheetah's Proposed Construction	Support
<p>"the optical signal" in:</p> <p>an optical signal separator operable to receive <u>the optical signal</u> communicated by the light pipe (1)</p> <p>one or more reflective surfaces to communicate <u>the optical signal</u> to the MEMS device (10)</p> <p>separating <u>the optical signal</u> communicated for processing into at least a first portion of optical signal wavelengths and a second portion optical signal wavelengths (13)</p> <p>an optical signal separator operable to receive <u>the optical signal</u> communicated by the light pipe (18)</p>	<p>the optical signal wavelengths to be processed</p>	<p>Claims 1, 10, 13, 18; Abstract; Figs. 11, 15; 1:24-27, 1:31-36, 1:65-67, 2:20-31, 26:22-29, 28:43-47, 31:15-21, 34:24-28, 34:64-67, 35:58-60, 41:63-65, 42:66-43:3, 43:39-41; 11/1/05 Response to Office Action; 1/12/06 Office Action</p>
<p>the amplitude of the MEMS output signal capable of being varied depending on the movement of the moveable mirror (1, 18)</p> <p>the amplitude of the MEMS output signal capable of being changed by moving the moveable mirror (13)</p>	<p>the amplitude of the output signal changes based on the position of the moveable mirror</p>	<p>Claims 1, 13, 18; Figs. 1a-3c, 6, 17 2:13-14; U.S. Patent No. 6,882,771, claims 1-3, 8-10.</p>

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'862 Patent Term/Phrase (claim #)	Cheetah's Proposed Construction	Support
<p>receive the portion of first part of the optical signal (1, 12)</p> <p>receiving at least the first portion of optical signal wavelengths (13, 17)</p> <p>receive the portion of first part of the optical input signal (18, 20)</p>	plain meaning	Claims 1, 12, 13, 17, 18, 20; Figs. 10(b), 11; 2:20-25, 4:53-62; 27:5-28, 28:43-58, 31:31-36, 36:63-37:6
<p>the portion of first part of the optical signal (1, 12)</p> <p>the first portion of optical signal wavelengths (13, 17)</p> <p>the portion of first part of the optical input signal (18, 20)</p>	plain meaning	Claims 1, 12, 13, 17, 18, 20
to communicate the optical signal to the MEMS device (10)	plain meaning	Claim 10; Figs. 1a-17
the MEMS output signal (1, 13, 18)	the optical signal reflected from the MEMS	Claims 1, 13, 18; 2:10-19, 10:49-52; 1/12/06 Office Action; 6/23/03 Response to Office Action

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U.S. Patent No. 6,888,661

'661 Patent Term/Phrase (claim #)	Cheetah's Proposed Construction	Support
thin film device (1, 7, 13, 29, 31, 48, 51, 55)	a device that includes one or more thin layers	Claims 1, 7, 13, 29, 31, 48, 51, 55; Abstract; Figs. 1-2, 6a-g, 11a-b; 1:32-2:29; 15:49-56; 17:16-23
cavity[ies], optical cavity[ies] (1, 6, 8, 22, 23, 48-50, 57, 58)	the stratum between reflective stacks, each reflective stack including a dielectric material, another material, or a gas, or any combination of those	Claims 1, 6, 8, 22, 23, 48-50, 57, 58; 4:55-59
wherein at least some of the plurality of cavities are physically coupled to others of the plurality of cavities (1, 48)	plain meaning, namely, at least some the plurality of cavities are coupled physically to one another	Claims 1, 48; Abstract; Fig. 15, 24:27-25:14
the plurality of cavities comprise a sufficient number of cavities to result in an approximately square frequency response for the device the approximately square frequency response comprising a frequency response with a -1 decibel bandwidth of no less than 20 GHZ. (1, 48)	plain meaning	Claims 1, 48; Abstract; Figs. 4-5; 6:36-60; 25:15-20